

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

APR 22 2004

FURNISHED BY THE AUTHORITY
LAST SHEET

Applicant's or agent's file reference STADM-65141	FOR FURTHER ACTION	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/US03/31266	International filing date (day/month/year) 03 October 2003 (03.10.2003)	(Earliest) Priority Date (day/month/year) 04 October 2002 (04.10.2002)
Applicant SABEUS PHOTONICS, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the Report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (See Box II).

4. With regard to the title,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the abstract,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No. 2



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.



None of the figures

Box III TEXT OF THE ABSTRACT (Continuation of Item 5 of the first sheet)

The abstract is too long (PCT Rule 8.1(b)). The abstract must be less than 150 words, or 200 words when no figure is to be published.

The technical features mentioned in the abstract do not include a reference sign between parentheses (PCT Rule 8.1(d)).

An array of fiber optic hydrophones (30) is formed by winding of optical fiber around a continuous, yet flexible cylindrical core (31). The cylindrical core contains an elastomer filled with a specified percentage of voided plastic microspheres. The elastomer provides the necessary radial support of the optical fiber and with the included voided microspheres, provides sufficient radial compliance under acoustic pressure. The cylindrical core can be made in long sections allowing a plurality of hydrophones to be wound onto it using a single optical fiber, with individual hydrophone elements separated by internal reflectors such as Fiber Bragg Gratings (32). The center of the core may include a strength member and a central hollow tube for passing of additional optical fibers. The aforementioned hydrophone array is then packaged within a protective outer coating or coatings as required for the specific application.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/31266

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G02B 6/00

US CL : 385/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 385/12, 13, 103, 104, 108

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,211,964 B1 (LUSCOMBE et al) 03 April 2001 (03.04.2001), abstract, Column 3, line3 - Column 8, line 17, figures 4A and 5A	1-39
X	US 4,468,091 A (SCHMADEL et al) 28 August 1984 (28.08.1984), Abstract, Figure 10, Column 2, lines 65-68, Column 7, lines 25-28, Column 8, lines 29-32	1, 8-14, 22-23
A	US 4,444,460 A (STOWE) 24 April 1984 (24.04.1984), Figure 12	14-15

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

03 February 2004 (03.02.2004)

Date of mailing of the international search report

19 APR 2004

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Continuation of B. FIELDS SEARCHED Item 3:
USPTO "EAST" searched
Search terms: acoustic, sensor, optical, fiber, grating